Hazard Communication Standard 29 CFR 1910.1200

Complying with OSHA's New HazCom Standard that includes GHS

The new HazCom Standard

published in the Federal Register March 26,2012
It is 878 pages and became law May 25, 2012

OSHA said don’t worry, this does not replace the old 18 page standard, it only updates it.

The HazCom Standard as it was written in the Federal Register had hundreds of pages of legalese in it. What does the standard published by OSHA look like?

- The Hazard Communication Standard – 15 pages
- Appendix A – Health Hazard Criteria (Mandatory) – 30 pages (NEW)
- Appendix B – Physical Criteria (Mandatory) – 10 page (NEW)
- Appendix C – Allocation of Label Elements (Mandatory) - 61 pages (NEW)
- Appendix D – Safety Data Sheets (Mandatory) - 3 pages (NEW)
- Appendix E – Definition of a Trade Secret (Mandatory) – 1 page
- Appendix F – Guidance for Hazard Classifications – Carcinogenicity (Non- Mandatory) - 4 pages (NEW)

Why Develop a New HazCom Standard

We live and work in a Global Economy. In 1983 to United Nations began working on a Globally Harmonized System to classify and label chemicals.

The United States did not get involved right away so a lot of the structure of the Globally Harmonized system came from the European Unions HazCom system. This fact will cause us some problems in implementing the new HazCom Standard

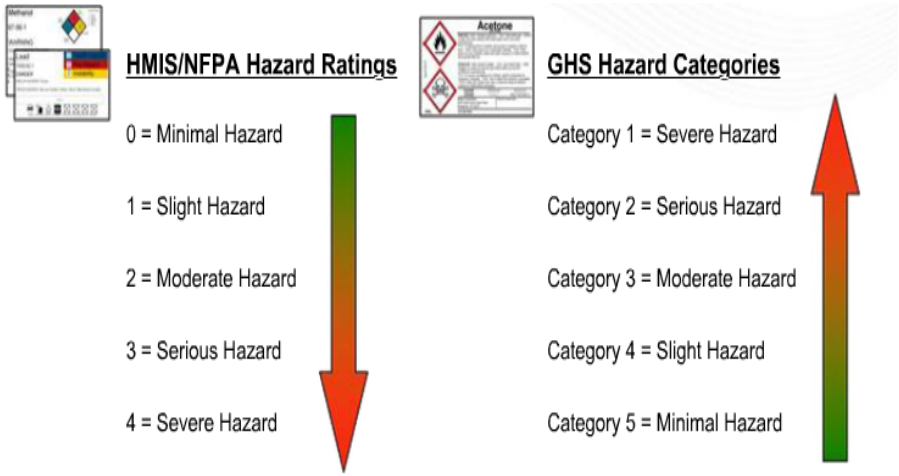
Our new HazCom standard aligns with the UN's Globally Harmonized system.

Good Points

- Standardized 16 section SDS
- Standard Label Requirements
- OSHA HazCom webpage

Bad Points

- Four Year Implementation



Where will I see those differences?

- The GHS hazard categories are displayed in the chemical's Safety Data Sheet and not typically shown on the label
- Due to the significant change in classifications, it will be imperative to train employees on the change to ensure there is no confusion or conflicting information given

Compliance Dates and their Problems

- Revised HazCom Standard with GHS Compliance went into full effect – May 25, 2012
- All employees trained by – December 1, 2013
- Chemical Manufacturers must have new SDS's and Labels for all chemicals – June 1, 2015 Some manufacturers already have new SDS available some you won't see until December 1, 2015.
- Distributor Label Compliance – December 1, 2015
- Alternative Workplace Labeling/Written Program Employer full compliance – June 1, 2016

GHS
The Globally Harmonized System of Classification and Labeling of Chemicals

HAZARD COMMUNICATION

The standard that gave workers the right to know, now gives them the right to understand.

Safety & Health Topics Page: Hazard Communication

Labeling | Safety Data Sheets | Pictograms | Effective Dates

Dr. David Michaels discusses the publication of the Final Rule for Hazard Communication

"Exposure to hazardous chemicals is one of the most serious threats facing American workers today," said U.S. Secretary of Labor Hilda Solis. "Revising OSHA's Hazard Communication standard will improve the quality and consistency of hazard information, making it safer for workers to do their jobs and easier for employers to stay competitive."

The Hazard Communication Standard (HCS) is now aligned with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS). This update to the Hazard Communication Standard (HCS) will provide a common and coherent approach to classifying chemicals and communicating hazard information on labels and safety data sheets. Once implemented, the revised standard will improve the quality and consistency of hazard information in the workplace, making it safer for workers by providing easily understandable information on appropriate handling and safe use of hazardous chemicals. This update will also help reduce trade barriers and result in productivity improvements for American businesses that regularly handle, store, and use hazardous

Highlights:

- HCS/HazCom 2012 Final Rule
  - **Federal Register:** The Final Rule was filed on March 20th at the Office of the Federal Regis and available for viewing on their Public Electronic Inspection Desk. The Federal Regis published the final rule on March 26, 2012. Th effective date of the final rule is 60 days after the date of publication.
    - Federal Register [PDF, 52 MB]
- HCS Comparison: HazCom 1994 and HazCom 2012
  - Side-by-side
  - Redline Strikeout of the Regulatory Text
- HazCom 1994
- **Press Release:** US Department of Labor's OSHA publishes final rule to update the Hazard Communication Standard (HCS)
- Guidance
  - OSHA Briefs [PDF 263 KB]
  - Fact Sheet
  - Quick Cards
- Downloadable Pictograms
- August 2012 OSHA/SCHC Alliance Webinar
- *Downloadable Hazard Communications 2012 Presentation* [PPTX*]
- Question of the Month

Side-by-Side Comparison of OSHA's Existing Hazard Communication Standard (HCS 1994) vs. the Revised Hazard Communication Standard (HCS 2012)

Hazards Not Otherwise Classified

"**Hazard not otherwise classified (HNOC)**" means an adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

OSHA®

Changes in Definitions

- The following physical hazard terms were removed from the final rules definition section:
  - Combustible liquid; compressed gas; explosive; flammable; flashpoint; organic peroxide; oxidizer; pyrophoric; unstable (reactive); and water-reactive

Changes in Definitions

- The following terms are being added to the definitions section:
  - Classification; hazard category; hazard class; hazard not otherwise classified; hazard statement; label elements; pictogram; precautionary statement; product identifier; pyrophoric gas; safety data sheet (SDS); signal word; simple asphyxiant; and substance
  - These terms are primarily related to the changes in approach to evaluating hazards, and providing label information

Changes in Flammable Classes

GHS			Flammable and Combustible Liquids Standard (29 CFR 1910.106)		
Category	**Flashpoint °C (°F)**	**Boiling Point °C (°F)**	**Class**	**Flashpoint °C (°F)**	**Boiling Point °C (°F)**
Flammable 1	< 23 (73.4)	≤ 35 (95)	Flammable Class IA	< 22.8 (73)	< 37.8 (100)
Flammable 2	< 23 (73.4)	> 35 (95)	Flammable Class IB	< 22.8 (73)	≥ 37.8 (100)
Flammable 3	≥ 23 (73.4) and ≤ 60 (140)		Flammable Class IC Combustible Class II	≥ 22.8 (73) and < 37.8 (100) ≥ 37.8 (100) and < 60 (140)	
Flammable 4	> 60 (140) and ≤93 (199.4)		Combustible Class IIIA	≥ 60 (140) and <93.3 (200)	
None			Combustible Class IIIB	≥ 93.3 (200)	

Labeling

What's on a Label

- Product Identifier
- Pictogram
- Signal Word
- Hazard Statements
- Precautionary Statements
- Information on the Chemical Manufacturer, Importer or other Responsible Party

Pictograms

Must be black picture on a white background framed with a red border

 **Flame Over Circle**	 **Flame**	 **Exploding Bomb**
• Oxidizers	• Flammables • Self Reactives • Pyrophorics • Self-Heating • Emits Flammable Gas • Organic Peroxides	• Explosives • Self Reactives • Organic Peroxides

Pictograms

Must be black picture on a white background framed with a red border

 **Skull and Crossbones**	 **Corrosion**	 **Gas Cylinder**
• Acute toxicity (severe)	• Corrosives	• Gases Under Pressure

Pictograms

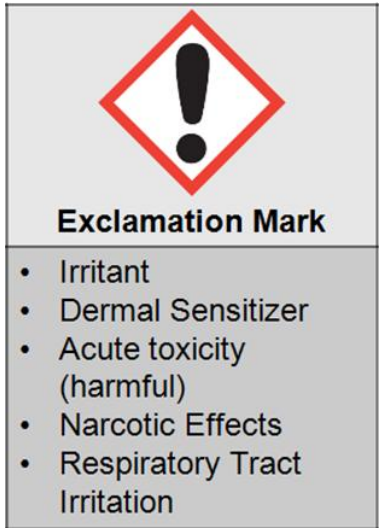
Must be black picture on a white background framed with a red border

 **Health Hazard**	 **Environmental**	 **Exclamation Mark**
• Carcinogen • Respiratory Sensitizer • Reproductive Toxicity • Target Organ Toxicity • Mutagenicity • Aspiration Toxicity	• Environmental Toxicity	• Irritant • Dermal Sensitizer • Acute toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritation

Skull and Crossbones

- Acute toxicity (severe)

If you have a pictogram for Acute Toxicity (Severe) you don't put the one for Acute Toxicity (harmful)



Exclamation Mark

- Irritant
- Dermal Sensitizer
- Acute toxicity (harmful)
- Narcotic Effects
- Respiratory Tract Irritation

If you have Corrosive you don't put Irritant

If you have Health Hazard you don't put Respiratory Tract Irritation

Signal Words

- There are two Signal words:
  - **Danger**
  - **Warning**

Caution is no longer listed as part of OSHA's HazCom Standard, but will very likely still be seen on manufacturers product labels.

If both Danger and Warning apply Danger will always be the signal word used.

Hazard Statement

“Hazard statement” - a statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

- For example: Harmful if inhaled [for Category 4 Acute Toxicity - Inhalation]

Hazard Statements

- A single harmonized hazard statement for each level of hazard within each hazard class
  - Example: Flammable liquids
    - Category 1: Extremely flammable liquid and vapour
    - Category 2: Highly flammable liquid and vapour
    - Category 3: Flammable liquid and vapour
    - Category 4: Combustible liquid

Hazard Statements

- Hazard Statements that start with H2*xx* are **PHYSICAL HAZARD STATEMENTS**
  Example: H228 – Flammable solid
- Hazard Statements that start with H3*xx* are **HEALTH HAZARD STATEMENTS**
  Example: H330 – Fatal if inhaled
- Hazard Statements that start with H4*xx* are **ENVIRONMENTAL HAZARD STATEMENTS**
  Example: H400 – Very toxic to aquatic life

Precautionary Statements

“Precautionary statement” means a phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

- For example: Wear face protection

Precautionary Statements

Precautionary statements supplement hazard information on the label.

Four types:

- Prevention
- Emergency response
- Storage
- Disposal

Precautionary Statements

- Precautionary Statements that start with P1*xx* are **GENERAL PRECAUTIONARY STATEMENTS**
  Example: P102 – Keep out of reach of children
- Precautionary Statements that start with P2*xx* are **PREVENTION PRECAUTIONARY STATEMENTS**
  Example: P284 – Wear respiratory protection
- Precautionary Statements that start with P3*xx* are **RESPONSE PRECAUTIONARY STATEMENTS**
  Example: P331 – Do NOT induce vomiting

Precautionary Statements

- Precautionary Statements that start with P4*xx* are **STORAGE PRECAUTIONARY STATEMENT CODES**
  Example: P402 – Store in a dry place
- Precautionary Statements that start with P5*xx* are **DISPOSAL PRECAUTIONARY STATEMENT CODES**
  Example: P501 – Dispose of contents/container to

Sample Label

- Product Code:123456
- Product Name: Really Neat Compounds
- Company Name: Stellar Products
  100 Manufacturer Drive, Anywhere, USA
  Emergency Phone Number: (555) 555-0000

- Danger (Signal Word)
- Highly Flammable liquid (Hazard Statement)
- Explosive liquid (Hazard Statement)
- Skin sensitizer (Hazard Statement)
- Wear protective gloves (Precautionary Statement)
- Wash hands thoroughly after using this product (Precautionary Statement)
- In case of fire, call 911 (Precautionary Statement)

DANGER

Carbon Monoxide

H220: Extremely flammable gas. - H331: Toxic if inhaled. - H360D: May damage the unborn child. - H372: Causes damage to organs through prolonged or repeated exposure

Keep container tightly closed. Avoid breathing vapours. If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Center or doctor. Store in a well-ventilated place.

30.0 L

3630-08-0	006-001-00-2
211-128-3	#####

Company ABC
1234 Long Road
New York, New York
555-800-8585

Shipping Labels

- Effective June 1, 2015 all Shipping labels will be required to have all GHS label elements

Shipping Container Label
(55 gallon/200 liter drum)

PRODUCT IDENTIFIER

CODE _____
Product Name _____

SUPPLIER IDENTIFICATION

Company Name_____
Street Address _____
City _____ State _____
Postal Code _____ Country _____
Emergency Phone Number _____

PRECAUTIONARY STATEMENTS

Keep container tightly closed. Store in cool, well ventilated place that is locked.
Keep away from heat/sparks/open flame. No smoking.
Only use non-sparking tools.
Use explosion-proof electrical equipment.
Take precautionary measure against static discharge.
Ground and bond container and receiving equipment.
Do not breathe vapors.
Wear Protective gloves.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Dispoae of in accordance with local, regional, national, international regulations as specified.

In Case of Fire: use dry chemical (BC) or Carbon dioxide (CO_2) fire extinguisher to extinguish.

First Aid
If exposed call Poison Center.
If on skin (on hair): Take off immediately any contaminated clothing. Rinse skin with water.

SIGNAL WORD
Danger

HAZARD STATEMENT
Highly flammable liquid and vapor.

SUPPLEMENTAL INFORMATION
Directions for use
_____
_____
_____
Fill weight: _____ Lot Number _____
Gross weight: _____ Fill Date: _____
Expiration Date: _____

Pictograms within DOT label

DOT Shipping

Flammable liquids, toxic, n.o.s. (contains XYZ)
UN 1992

Safety Data Sheets

LGC Standards

Safety Data Sheet
acc. to ISO/DIS 11014

Printing date 02/05/2013 *Reviewed on 02/05/2013*

1 Identification of the substance/mixture and of the company/undertaking

· *Product identifier*

· *Trade name:* **(1R)-1-(3,4-Dihydroxyphenyl)-2-methylaminoethanesulphonic Acid (Adrenaline beta-Sulphonate)**

· *Article number:* MM0614.01
· *CAS Number:*
78993-75-2
· *Application of the substance / the preparation* Reference material for laboratory use only
· *Manufacturer/Supplier:*
VHG Labs, Inc
LGC Standards
276 Abby Road
Manchester, NH 03103
UNITED STATES OF AMERICA
Tel : +1 (603) 622-7660
Fax : +1 (603) 622-5180
eMail : custsvc@vhglabs.com
Web : www.vhglabs.com
· *Information department:*
Product safety department
eMail : sds-request@lgcstandards.com
· *Emergency telephone number:* 800-424-9300 Chemtrec (24 hrs)

2 Hazards identification

· *Classification of the substance or mixture*

GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.
Acute Tox. 3 H311 Toxic in contact with skin.
Acute Tox. 3 H331 Toxic if inhaled.

GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

H402 Harmful to aquatic life.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

· *Label elements*
· *GHS label elements*
The substance is classified and labelled according to the Globally Harmonized System (GHS).
· *Hazard pictograms*

GHS06

· *Signal word* Danger
· *Hazard statements*
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H317 May cause an allergic skin reaction.
H402 Harmful to aquatic life.
H412 Harmful to aquatic life with long lasting effects.
· *Precautionary statements*
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

(Contd. on page 2)

Hazard Communication
Safety Data Sheets

1. Identification
2. Hazard(s) identification
3. Composition/ingredients
4. First-aid measures
5. Fire-fighting measures
6. Accidental release measures
7. Handling and storage
8. Exposure controls/ Personal protection
9. Physical and chemical properties
10. Stability and reactivity
11. Toxicological information
12. Ecological information
13. Disposal considerations
14. Transport information
15. Regulatory information
16. Other information

Basic chemical information

SDS - Sections

1. **Identification:** Product identifier; manuf. or distributor contact info; emergency phone #; recommended use; restrictions
2. **Hazard(s) identification**: Classification, chemical hazards; label elements
3. **Composition/Information on ingredients**: Chemical ingredients; trade secret claims

Emergency information
SDS - Sections

4. **First-aid measures**: Acute/Delayed symptoms and effects; treatment
5. **Fire-fighting measures**: Suitable extinguishing techniques, equipment; chemical hazards from fire
6. **Accidental release measures**: Emergency procedures; protective equipment; containment and cleanup methods

Operational Control Measures
SDS - Sections

7. **Handling and storage**: Precautions for safe handling/storage, and incompatibilities
8. **Exposure controls/ Personal protection**: OSHA PELs; TLVs®; engineering controls; PPE

Technical Chemical Information
SDS - Sections

9. **Physical and chemical properties**: Chemical's characteristics
10. **Stability and reactivity**: Chemical stability and possibility of reactions
11. **Toxicological information**: Exposure routes; related symptoms, acute and chronic effects; numerical measures of toxicity

Environmental and Transport Information

SDS – Sections (non-mandatory for OSHA)

12. **Ecological information**: Ecotoxicity, persistence, bioaccumulative potential, mobility in soil, adverse affects
13. **Disposal considerations**: Proper disposal methods, recycling or reclamation, and safe handling practices
14. **Transport information**: Classification info for shipping/transporting by road, air, rail, or sea

Regulatory and Other information

SDS – Sections (section 15 non-mandatory for OSHA)

15. **Regulatory information**: Safety, health, environmental regulations specific for the product that is not indicated anywhere else on the SDS
16. **Other information, including date of preparation or last revision**

Training

- A lot of the training requirements stay the same. You can train on individual chemicals or categories of hazards (such as flammability or carcinogenicity)
- Who must be trained has not changed. Any employee that is exposed to hazardous chemicals in the workplace
- OSHA states it is better to train too many employees rather than too few

Training

Under the revised standard employees are suppose to go from the Right to Know what the chemical hazards are and how to protect themselves from those hazards to the Right to Understand the chemicals hazards, methods used to detect a release, the physical and health hazards, and the measures needed to protect the employee from those hazards.

Training

- Training on label elements-pictograms, signal words, hazard statements and precautionary statements
- Training on new SDS format and where they can go to find an SDS
- Training on your Written Hazcom Program (to include your in-house labels, PPE program and chemical inventory
- Types and magnitude of chemical hazards in their work area

Training

- Have a system in place to offer refresher training as required
- Make sure your training program:
  - Allows opportunity for employees to ask questions
  - Includes instructions on what to do with an unlabeled container
  - Includes instructions on what to do when no SDS can be found

Effective Training (OSHA Quote)

- OSHA requires that employers provide "Effective" training
- "Effective" means that the employees must carry the knowledge from the training into their daily jobs.

  For example, if asked they should know where hazardous chemicals are present in their work area and should also know how to protect themselves.

Training in Limbo

Employees must be trained by December 1, 2013.

Manufactures don't have to have new SDS's or labels updated until June 1, 2015. Distributers can keep shipping using the old labels and MSDS's until December 1, 2015

Employees must have an understanding of both systems and be made aware of their differences and the fact that they will find both in the workplace.

BEER

HAZARD WARNING: DANGER: MAY BECOME IRRITABLE & PERVERSE. DO NOT ATTEMPT TO DRIVE OR OPERATE HEAVY MACHINERY.

TARGET ORGANS

BLADDER
STOMACH

BRAIN
KIDNEYS

PERSONAL PROTECTIVE EQUIPMENT REQUIRED

PORCELAIN THRONE | GAS RESPIRATOR | ASPIRIN | BUCKET | DESIGNATED DRIVER | SLEEP

DANGER

HAS BEEN KNOWN TO CAUSE IRRATIONAL BEHAVIOR IN LABORATORY RATS

BRADY
MS1223 800-635-7557

Be Sure To Train On:

The differences between the OSHA/GHS Hazard Category rating system and both NFPA and the HMIS Hazard rating systems

HMIS/NFPA Hazard Ratings

0 = Minimal Hazard

1 = Slight Hazard

2 = Moderate Hazard

3 = Serious Hazard

4 = Severe Hazard

GHS Hazard Categories

Category 1 = Severe Hazard

Category 2 = Serious Hazard

Category 3 = Moderate Hazard

Category 4 = Slight Hazard

Category 5 = Minimal Hazard

Where will I see those differences?

- The GHS hazard categories are displayed in the chemical's Safety Data Sheet and not typically shown on the label
- Due to the significant change in classifications, it will be imperative to train employees on the change to ensure there is no confusion or conflicting information given

Checklist for Compliance

- Get a copy of the standard
- Read the requirements of the standard
- Prepare/update your chemical inventory
- Obtain a Safety Data Sheet (SDS) for each hazardous chemical - Some manufacturers already have new SDS available some you won't see until December 1, 2015. *(Be sure and archive all old MSDS's for at least 30 years)*
- Review/develop the written HazCom program/plan and update as necessary

Checklist for compliance (continued)

- Assign responsibilities for HasCom tasks
- Ensure containers are labeled
- Conduct worker training
- Make SDS's available to workers
- Establish procedures to keep SDS's current and available
- Establish procedures to revise/update the written program
- Establish procedures to evaluate the effectiveness of the program

To Summarize….